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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,893	12/29/2000	Robert Palifka	09991-014001	6685

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/749,893	Applicant(s) PALIFKA ET AL.	
	Examiner Michael P. Nghiem	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-33,35-45,48,50-52,54-58,60,61,63-100 and 102-106 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45,48,50-52,54-58,60,61,65,102 and 104-106 is/are allowed.
- 6) ☒ Claim(s) 29-33,35,36,44,66-76,100 and 103 is/are rejected.
- 7) ☒ Claim(s) 37-43,63,64 and 77-99 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendment filed on May 20, 2005 has been acknowledged.

Claim Objections

Claims 63 and 64 are objected to because of the following informalities: claim 63 depends from cancelled claim 62. Claim 64 is objected to because it depends from objected claim 63. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-33, 35, 36, 44, 66-76, 100, and 103 are rejected under 35 U.S.C. 102(b) as being anticipated by Gamo (US 5,844,348).

Regarding claims 29, 44, 100, and 103, Gamo discloses an ink jet printing module (Fig. 2) comprising a piezoelectric element (12) having a surface (Fig. 2), and a thermoplastic

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bonding component (50), the thermoplastic bonding component having dimensions of a surface of a first component heat-bonded to the surface of the piezoelectric element (Fig. 2), wherein the piezoelectric element includes lead zirconium titanate (column 3, lines 46-47) and the thermoplastic bonding component has a thickness between 10 micron and 125 microns (column 5, lines 27-28), wherein the thermoplastic bonding component includes a plurality of openings (52, 54).

Regarding claim 30, Gamo discloses that the thermoplastic bonding component includes a first surface heat-bonded to the surface of the piezoelectric element (Fig. 2, column 4, line 17) and a second surface heat-bonded to a surface of a component (40) of the ink jet printing module (Fig. 2).

Regarding claims 31 and 71, Gamo discloses that the thermoplastic bonding component includes an electrode pattern (14, 16, when assembled, Fig. 2).

Regarding claims 32 and 72, Gamo discloses that the piezoelectric element is lead zirconium titanate (column 3, lines 46-47).

Regarding claims 33 and 73, Gamo discloses that the thermoplastic bonding component has a thickness between 1 micron and 150 microns (column 5, lines 27-28).

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Regarding claims 35, 75, and 103, Gamo discloses that the thermoplastic bonding component has a thickness between 20 microns and 50 microns (column 5, lines 27-28).

Regarding claim 36, Gamo discloses that the thermoplastic bonding component includes an adhesive polyimide (column 4, line 17).

Regarding claim 45, Gamo discloses that the thermoplastic bonding component includes a filter (50 has plural openings 52, 54).

Regarding claim 66, Gamo discloses applying pressure to the surface and the thermoplastic bonding component (Fig. 1).

Regarding claims 67 and 69, Gamo discloses that pressure is applied during heating (column 4, lines 51-55).

Regarding claim 68, Gamo discloses that the surface and the thermoplastic bonding component are substantially free of liquid adhesive (column 4, lines 51-55).

Regarding claim 70, Gamo discloses that the first component of the ink jet printing module is a piezoelectric element (column 3, lines 46-47).

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Regarding claim 76, Gamo discloses the thermoplastic bonding component includes an adhesive polyimide (epoxy, column 4, line 17).

Allowable Subject Matter

Claims 37-43 and 77-99 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 45, 48, 50-52, 54-58, 60, 61, 65, 102, and 104-106 are allowed.

Claims 63 and 64 would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Reasons For Allowance

The combination as claimed wherein the ink jet printing module comprising an ink channel, the piezoelectric element being positioned to subject ink within the channel to jetting pressure, and electrical contacts arranged for activation of the piezoelectric element (claims 37, 45, 52, 77, 102, 104, 106) or the ink jet printing module comprising an orifice plate and a protector strip adhered to the orifice plate, wherein either the

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orifice plate or the protector strip includes a thermoplastic bonding material (claims 43, 82) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

Applicant's arguments have been fully considered but they are moot in view of the new grounds of rejections.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

June 1, 2005